

Development of a PCR primer and a marker band for detection of *E. coli* from various sources based on arbitrary primer set.

ABSTRACT

Although, PCR methods aimed on the detection of genes associated with the pathogenicity of *Escherichia coli* have been reported, tests allowing the direct identification of this serotype are rare. In this study the Random Amplified Polymorphic DNA (RAPD) fingerprinting technique allowed genetic diversity assessment of 25 *E. coli* isolates of various sources. A highly significant finding from the DNA fingerprinting is the display of a predominant band at a size of 308 bp when arbitrary OPAE-10 primer was used. After sequencing this fragment primer called secD was designed to be used as PCR primer. secD primer pairs was highly specific to detect all isolates including *E. coli* O157: H7.

Keyword: Random amplified polymorphic DNA (RAPD); Uropathogenic *E. coli* (UPEC); Neonatal meningitis-associated *E. coli* (MNEC); University Putra Malaysia (UPM); Primer; Sequence.